Ruoxiang Li

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EDUCATION

City University of Hong Kong — **Hong Kong SAR**
PhD Program on Computer Science — *Aug. 2021 - Now*

The Hong Kong Polytechnic University — **Hong Kong SAR**
Research Assistant — *May 2020 - Aug. 2021*

National University of Defense Technology — **Changsha, China**
Master of Engineering in Computer Science and Technology — *Sept. 2017 - Dec. 2019*

Northeastern University — **Shenyang, China**
Bachelor of Engineering in Internet of Things Engineering — *Sept. 2013 - June 2017*

RESEARCH INTERESTS

- Real-time Systems
- Robot Operating System (ROS)
- Autonomous Driving System
- Event-based Vision

PUBLICATIONS

[1] **Ruoxiang Li**, Tao Hu, Xu Jiang, Laiwen Li, Wenxuan Xing, Qingxu Deng and Nan Guan. *ROSGM: A Real-Time GPU Management Framework with Plug-In Policies for ROS 2*. IEEE Real-Time and Embedded Technology and Applications Symposium (RTAS), 2023.

[2] **Ruoxiang Li**, Zheng Dong, Jen-Ming Wu, Chun Jason Xue and Nan Guan. *Modeling and Property Analysis of the Message Synchronization Policy in ROS*. IEEE International Conference on Mobility: Operations, Services, and Technologies (MOST). 2023.

[3] **Ruoxiang Li**, Nan Guan, Xu Jiang, Zhishan Guo, Zheng Dong, Mingsong Lv. *Worst-Case Time Disparity Analysis of Message Synchronization in ROS.* IEEE Real-Time Systems Symposium (RTSS). 2022.

[4] Xu Jiang, Dong Ji, Nan Guan, **Ruoxiang Li**, Yue Tang, Yi Wang. *Real-Time Scheduling and Analysis of Processing Chains on Multi-threaded Executor in ROS 2.* IEEE Real-Time Systems Symposium (RTSS). 2022.

[5] **Ruoxiang Li**, Dianxi Shi, Yongjun Zhang and Ruihao Li. *Asynchronous event feature generation and tracking based on gradient descriptor for event cameras*. International Journal of Advanced Robotic Systems. 2021.

[6] Ruolin Sun, Dianxi Shi, Yongjun Zhang, Ruihao Li, and **Ruoxiang Li**. *Data-Driven Technology in Event-Based Vision*. Complexity. 2021.

[7] **Ruoxiang Li**, Dianxi Shi, Yongjun Zhang, Kaiyue Li and Ruihao Li. *FA-Harris: A Fast and Asynchronous Corner Detector for Event Cameras*. IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS). 2019.

[8] Kaiyue Li, Dianxi Shi, Yongjun Zhang, **Ruoxiang Li** and Ruihao Li. *Feature Tracking Based on Line Segments with the Dynamic and Active-pixel Vision Sensor (DAVIS)*. IEEE Access. 2019.

[9] Mingkun Wang, Dianxi Shi, Naiyang Guan, Tao Zhang, Liujing Wang and **Ruoxiang Li**. *Unsupervised pedestrian trajectory prediction with graph neural networks*. The IEEE International Conference on Tools with Artificial Intelligence (ICTAI), 2019.

[10] Zhuoyue Yang, Dianxi Shi, Yongjun Zhang, Shaowu Yang, Fu Li and **Ruoxiang Li**. *Multi-UAV Collaborative Monocular SLAM Focusing on Data Sharing*. International Conference on Neural Information Processing. 2018.

HONORS AND AWARDS

- Outstanding Thesis Award (Nov. 2019)
- Outstanding Postgraduate Award (June 2019)
- Outstanding Student Scholarship (2014 - 2017)
- Outstanding Graduate of Liaoning Province (Mar. 2017)
- The Asia-Pacific Robot Contest (Third Award, Best Design Award) (June 2015)
- Robot Competition for Undergraduates in Liaoning Province (First Award) (Oct. 2014)

LANGUAGE SKILLS

Chinese (Native Speaker), English (Fluent. IELTS: 6.5, Listening: 6, Reading: 7.5, Writing: 5.5, Speaking: 6)

COMPETITION EXPERIENCE

ABU Robocon (Third Award, Best Design Award) *June 2015*

- **Team Task:** Independently design two robots cooperating to play badminton doubles.
- **Duties included:** Coordinate conversion, data acquisition and processing procedures based on Kinect for Windows v2 using C language, test the effect of illumination on Kinect depth camera.
- **Development Tools:** Halcon, Microsoft Visual Studio

Robot Competition for Undergraduates in Liaoning Province (First Award) *Oct. 2014*

- **Team Task:** Independently design two robots cooperating to collect the golf balls in the designated area and transport the collected balls to the starting position.
- **Duties included:** Robot control program design, control the robot to collect the golf balls by fixed route based on LPC1700 series Cortex-M3 micro-controller and μC/OSII system (using C language).
- **Skills & devices:** CAN communication, Gyroscope, Encoder